

**THE COMMONWEALTH OF MASSACHUSETTS
BEFORE THE
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY**

**Western Massachusetts Electric Company
Electric Industry Restructuring Proposal**

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D.T.E. 97-120

**DIRECT TESTIMONY OF
WILLIAM A. MONSEN**

Regarding Nuclear Cost Recovery

On Behalf of:

**THE COMMONWEALTH OF MASSACHUSETTS
DIVISION OF ENERGY RESOURCES**

October 23, 1998

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Western Massachusetts Electric Company, D.T.E. 97-120**

Table of Contents

I.	WITNESS IDENTIFICATION AND QUALIFICATIONS	1
II.	PURPOSE AND SUMMARY OF TESTIMONY	4
III.	COST RECOVERY FOR MILLSTONE 1	13
	A. WMECo Proposal	13
	B. Critique of WMECo Proposal	15
	C. Conclusion	17
IV.	COST RECOVERY FOR MILLSTONE 2 AND 3	18
	A. Description of WMECo's Cost Recovery Proposal	18
	B. Recovery of Going-Forward Costs	19
	1. WMECo's Proposal	19
	2. Critique of WMECo's Proposal	22
	3. Conclusions	26
	4. Alternative to WMECo Proposal	27
	a. Objectives	27
	b. Proposed Sharing Mechanism	30
	c. Commencement Date for PBR Mechanism	32
	d. PBR Mechanism Should Apply to Each Unit Individually	33
	e. Market Price Should Be Based on ISO-NE Spot Price	34
	f. Alternative for Recovery of Going-Forward Costs	34
	1) Option 1: Forecast of Going-Forward Costs	35
	2) Option 2: <i>Ex Post</i> Determination of Reasonable Cost of Service	43
	g. Conclusion	45

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I. WITNESS IDENTIFICATION AND QUALIFICATIONS

Q. Mr. Monsen, please identify yourself for the record.

A. My name is William A. Monsen. I am a Principal of MRW & Associates, Inc., 1999 Harrison Street, Suite 1440, Oakland, California 94612.

MRW & Associates, Inc. ("MRW") is an economic and financial consulting firm that assists energy consumers, producers, and regulatory agencies in the analysis of project proposals, power markets, utility ratemaking, and other regulatory issues facing electric and natural gas utilities.

Q. Please summarize your experience and qualifications.

A. I have been an energy consultant with MRW since 1989. Over that period, I have assisted independent power producers, electric consumers, financial institutions, and regulatory agencies with issues related to power project development, project valuation, purchasing electricity, and regulatory matters. I have directed or worked on projects in a number of regions in the United States, including New England, California, Colorado, Wisconsin, and Nevada. Prior to joining MRW, I worked at Pacific Gas and Electric Company

1 (“PG&E”). At PG&E, I held a number of positions related to corporate planning,
2 forecasting, electric resource planning, and energy conservation.

3
4 **Q. Please describe some of your assignments at MRW that are relevant to this**
5 **proceeding.**

6
7 A. While at MRW, I have led or participated in a wide variety of assignments related to the
8 estimation and recovery of transition costs resulting from the deregulation of the electric
9 utility industry. These assignments include:

- 10 • Developing estimates of transition costs for Public Service Company of New
11 Hampshire on behalf of a private client;
- 12 • Assisting a colleague with the evaluation of Public Service Company of New
13 Hampshire’s restructuring proposal on behalf of a private client;
- 14 • Assisting the Massachusetts Division of Energy Resources (“DOER”) with its
15 assessment of the electric restructuring proposals of the Massachusetts Electric
16 Company and the Boston Edison Company;
- 17 • Forecasting transition costs for Pennsylvania Electric Company, Duquesne Light
18 Company, and West Penn Power Company in support of a colleague’s testimony
19 on behalf of a private client in those stranded cost proceedings;
- 20 • Forecasting transition costs for Southern California Edison on behalf of the
21 California Department of General Services and an energy services provider;
- 22 • Forecasting transition costs in California related to independent power contracts
23 on behalf of the California Independent Energy Producers, an industry trade
24 association;
- 25 • Evaluating the relative costs, benefits, regulatory structures, and risks associated
26 with two proposed mergers involving San Diego Gas and Electric on behalf of the
27 City of San Diego;
- 28 • Analyzing the relative cost-effectiveness of the continued operation of the Pilgrim
29 nuclear power plant relative to existing independent power projects in
30 Massachusetts on behalf of a private client;

- Evaluating power markets and market prices for private clients that included owners, potential buyers, and developers of independent power projects in a wide range of utility service territories, including PG&E, Southern California Edison, San Diego Gas & Electric, Nevada Power, Montana Power Company, West Plains Electric, Wisconsin Public Service, and two state-owned utilities in China.
- Evaluating power purchasing opportunities for a nationwide hospital chain and for the City of San Diego; and
- Providing power and gas market due diligence for major international financial institutions considering limited recourse financing of merchant plants or refinancing of existing projects located in the United States.

Q. Have you previously testified before this Department?

A. No.

Q. Is the testimony you are about to give, including all supporting exhibits and/or schedules, prepared by you, or under your supervision and guidance?

A. Yes.

Q. Please describe the contents of this direct testimony.

A. This direct testimony consists of the following sections:

- I. Witness Identification and Qualifications
- II. Purpose and Summary of the Direct Testimony
- III. Recovery of Costs Associated with Millstone 1
- IV. Recovery of Costs Associated with Millstone 2 and 3

1 **II. PURPOSE AND SUMMARY OF TESTIMONY**

2
3 **Q. What is the purpose of the testimony you are now about to give?**

4
5 A. DOER asked me to review the proposal developed by Western Massachusetts Electric
6 Company (“WMECo” or “Company”) for cost recovery for WMECo’s portion of three
7 nuclear units, Millstone 1, 2 and 3.¹ Specifically, DOER asked me to evaluate the
8 Company’s proposal for consistency with standard ratemaking treatment of assets and the
9 requirements of the Massachusetts Electric Industry Restructuring Act, Chapter 164 of the
10 Acts of 1997 (“Restructuring Act” or “Act”).² The Act states that “the recovery of such
11 prudently incurred costs shall occur only after such electric companies take all practical
12 measures to mitigate stranded investments during the transition to a competitive market.”
13 St. 1997, c. 164, § 1(t). In particular, the Act mandates that transition costs be mitigated
14 to the maximum extent possible:

15 Prior to the approval by the department of any plan allowing for
16 [transition cost recovery], the department shall issue an order
17 finding that the electric company has taken all reasonable steps to
18 mitigate to the maximum extent possible the total amount of
19 transition costs that will be recovered and to minimize the impact of
20 recovery of such transition costs on ratepayers in the
21 Commonwealth.
22

¹ Millstone 1, 2, and 3 are three jointly-owned nuclear power plants in Connecticut. WMECo owns 19 percent of both Units 1 and 2. WMECo also owns 12.24 percent of Unit 3. Companies affiliated with WMECo own all of Units 1 and 2 and 68 percent of Unit 3.

² The full name of the Act is: “Chapter 164 of the Acts of 1997: An act relative to restructuring the electric utility industry in the Commonwealth, regulating the provision of electricity and other services, and promoting enhanced consumer protections therein.”

1 St. 1997, c. 164 § 193 (G.L. c. 164, § 1G(d)). In addition, DOER asked me to develop
2 alternative proposals to the extent that WMECo's proposal for cost recovery is
3 inconsistent with standard ratemaking treatment or provisions of the Restructuring Act.
4

5 **Q. Please summarize WMECo's proposal for cost recovery for Millstone 1, 2 and 3.**

6
7 A. For Millstone 1, WMECo has proposed that it receive a return of and return on
8 unrecovered cost of plant, pre-decommissioning and post shutdown costs, materials and
9 supplies, and final nuclear core, in addition to recovery of decommissioning expenses.
10 WMECo Exhibit 13E, Schedule 2, p. 6A of 14 and p. 8 of 14. In other words, WMECo
11 proposes to receive essentially its full cost-of-service revenue requirements for Millstone 1
12 as if the unit were able to operate but was simply unavailable due to a forced or planned
13 outage.
14

15 For Millstone 2 and 3, WMECo has proposed a cost recovery scheme that consists of five
16 different components:

- 17 1. Recovery of the unrecovered book value of its capital investments in
18 Millstone 2 and 3 as of February 28, 1998, excluding any capital additions
19 authorized after December 31, 1995, net of deferred taxes.
20
- 21 2. A return on this unrecovered book value at the rate of return authorized by
22 the Restructuring Act.
23
- 24 3. Certain costs that WMECo contends are "unavoidable," such as property
25 taxes, NRC fees, and security expenses.
26

- 1 4. Variable operating costs including fuel, non-fuel operating and maintenance
2 (“O&M”) expenses, payroll taxes, income taxes, and return of and return
3 on capital additions authorized after December 31, 1995.³
4
5 5. Seventy-five percent of the difference between revenues received from
6 power sales by Millstone 2 and 3 and variable operating costs. WMECo
7 proposes that if costs exceed revenues, then WMECo would be responsible
8 for 75 percent of these losses while ratepayers would be responsible for the
9 remaining 25 percent.

10 Note that the sum of items 1-4 equals the traditional cost-of-service revenue requirements
11 for Millstone 2 and 3. Also note that WMECo proposes that items 1-3 above be
12 recovered through the Transition Charge. Finally, WMECo has proposed to securitize all
13 of the Transition Costs associated with Millstone 1 and 90 percent of the Transition Costs
14 for Millstone 2 and 3. Table 1 below presents WMECo’s proposed method of recovery
15 for the various costs related to the Millstone units.

³ These costs are referred to here as “going-forward” costs.

Table 1
WMECo's Nuclear Cost Recovery Proposal

Cost-of-Service Revenue Requirement			Additional Revenues
"Unavoidable" Costs	Capital Costs	Going-Forward Costs	Other Revenues
1. Property Taxes 2. NRC Fees 3. Insurance 4. Site and plant security 5. Regulatory compliance 6. Costs associated with spent nuclear fuel 7. Decommissioning	1. Return of and return on unrecovered book value of Millstone 1 ⁴ 2. Return of and return on unrecovered book value of Millstone 2 and 3 3. Return of and return on all capital additions authorized before 12/31/95	1. Nuclear Fuel 2. Non-fuel O&M 3. Income Taxes 4. Payroll Taxes 5. Return of and on capital additions authorized after 12/31/95	1. 75 percent of the difference between market revenues and going-forward costs

Q. Please summarize the basis for your analysis of WMECo's nuclear cost recovery proposal.

A. I developed a set of criteria with which to test the reasonableness of WMECo's cost recovery proposal. These criteria are based on historic utility ratemaking practice, Department of Telecommunications and Energy ("Department") precedent, the Restructuring Act, and reasonable policy goals for the operation of existing and new generation facilities by regulated utilities. The criteria are as follows:

⁴ WMECo has proposed that its Millstone 1 regulatory asset include its unrecovered book value, pre-decommissioning and post shutdown costs, materials and supplies, and final nuclear core.

1. WMECo should not earn a return on assets that have been prematurely retired or permanently taken out of service;
2. WMECo should earn a return on existing generating assets which are operational; these returns should be consistent with the rates of return specified in the Restructuring Act;
3. WMECo should mitigate its transition costs to the maximum extent possible, consistent with the Restructuring Act;
4. Generation assets that are cost-effective on a going-forward basis should continue to operate and be operated at the level that is economically efficient;
5. Owners of generation facilities should have strong incentives to remove from service power plants that are not cost-effective on a going-forward basis;
6. WMECo should be given strong incentives to reduce the going-forward costs associated with Millstone 2 and 3; and
7. Any proposed cost recovery program should not increase the administrative burden on the Department.

Q. Please summarize your conclusions regarding WMECo's proposal.

A. Based upon my review, I believe that WMECo's proposal for Millstone 1 is inconsistent with standard ratemaking treatment for assets that have been removed from service before the end of their planned lives. In addition, WMECo's cost recovery proposal for Millstone 2 and 3 is not consistent with standard ratemaking treatment. WMECo's proposed performance based rates ("PBR") mechanism provides WMECo with the opportunity to receive returns well in excess of its authorized rate of return without bearing any significant additional risks. Since WMECo's shareholders would receive these windfall profits, those funds would not be available to mitigate transition costs to the maximum extent possible.

1 Accordingly, I was asked by the DOER to develop an alternative proposal for nuclear cost
2 recovery that would (i) ensure consistency with standard ratemaking treatment for assets
3 that have been removed from service prematurely, that would (ii) be consistent with
4 Department policy and Massachusetts law, and that would (iii) comply with the
5 requirements of the Restructuring Act by mitigating transition costs to the maximum
6 extent possible.

7
8 **Q. Please summarize your proposal for cost recovery for Millstone 1, 2 and 3.**

9
10 A. I recommend that the Department adopt the following policies with regard to cost
11 recovery of the Millstone units:

- 12 1. Allow WMECo to obtain a return of, but not a return on, its investments in
13 Millstone 1.
- 14
15 2. Allow WMECo to obtain a return of and return on its investments in Millstone 2
16 and 3, provided they were prudently incurred and consistent with the rates of
17 return allowed pursuant to the Restructuring Act.
- 18
19 3. Credit ratepayers with 100 percent (rather than the Company's proposed 25
20 percent) of the net revenues before taxes (i.e., market revenues less going-forward
21 costs) from the operation of Millstone 2 and 3 if market-based revenues exceed
22 going-forward costs.
- 23
24 4. Debit ratepayers with none (rather than the Company's proposed 25 percent) of
25 the net "revenues" before taxes if going-forward costs exceed market-based
26 revenues for power from Millstone 2 and 3.
- 27
28 5. Implement this proposed methodology as soon as the Department reaches a
29 decision in this proceeding, rather than when Millstone 2 is on-line (as proposed by
30 the Company).
- 31
32 6. Require WMECo to implement this proposed methodology for the two units
33 separately rather than aggregating the net revenue before taxes for both units prior
34 to determination of the sharing amount.

1 7. Ensure that the Company books only “reasonable” going-forward costs associated
2 with Millstone 2 and 3. I propose two different approaches for determination of
3 reasonableness of going-forward costs. One approach would be for the
4 Department to adopt a forecast of the appropriate level of going-forward costs (on
5 a per-kWh basis). An alternate approach would be for the Department to review
6 the reasonableness of actual going-forward costs incurred by WMECo on an
7 annual or other periodic basis.
8

9 **Q. Please describe the major differences between your proposal and WMECo’s**
10 **proposal.**

12 A. The major differences between my proposal and that of WMECo revolve around three
13 policy questions. First, the Department must decide whether or not WMECo should
14 receive a return on its investment in Millstone 1. WMECo’s proposal would allow
15 WMECo’s shareholders to receive a return of and return on the remaining book value of
16 Millstone 1, whereas my proposal follows Department precedent and recommends that
17 WMECo should only recover its remaining book value but not earn a return on that
18 capital.

19
20 The second major area of disagreement between these two proposals relates to whether
21 WMECo should have the opportunity to receive a rate of return on undepreciated capital
22 in excess of WMECo’s authorized rate of return without any appreciable increase in risk.⁵
23 Under the Company’s proposal, WMECo could receive well in excess of its authorized
24 rate of return on undepreciated capital simply by operating Millstone 2 and 3. Since
25 WMECo’s parent, Northeast Utilities, controls from a financial perspective whether

⁵ In fact, given the guarantees in the Restructuring Act, it is quite possible that WMECo has reduced its risk of under-recovery. However, I do not propose to reduce returns on equity because of WMECo’s reduced risk.

1 Millstone operates or not, WMECo does not face significant risk of operating at a loss,
2 meaning that its sharing mechanism would likely yield small or no losses for WMECo.
3 Thus, WMECo's proposal would give the Company an opportunity to obtain much higher
4 rates of return without bearing commensurate risks. My proposal provides WMECo with
5 a fair rate of return for the risks that it bears until these plants are divested, namely the rate
6 of return that was deemed reasonable by the Department and the Restructuring Act.

7
8 The third area of difference between the proposals is whether ratepayers are better off
9 with an *ex post* determination of going-forward costs as proposed by WMECo or whether
10 WMECo should be given a reasonable cap on going-forward costs by the Department.
11 Under WMECo's proposal, it is unclear how "reasonable operating costs" would be
12 determined and what type of review would be performed (e.g., reasonableness review,
13 audit of costs, etc.). One of the options I recommend would guarantee WMECo a specific
14 level of cost recovery (on a per-kWh basis) for operating Millstone 2 and 3. If Northeast
15 Utilities were able to operate Millstone 2 and 3 for less than forecasted, then WMECo's
16 shareholders would benefit. Thus, Northeast Utilities and WMECo would have strong
17 positive incentives to find operating efficiencies.⁶ Customers may also benefit from these
18 incentives since lower operating costs may increase the market value of Millstone 2 and 3
19 when these units are divested, thereby increasing mitigation of transition costs.

⁶ WMECo currently has similar incentives under traditional ratemaking. If the Department authorizes a certain level of cost recovery in WMECo's rates and Northeast Utilities is able to operate Millstone 2 and 3 more efficiently, then WMECo profits.

1 **Q. Please summarize why the Department should adopt your proposal regarding**
2 **nuclear cost recovery.**

3
4 A. As discussed more fully below, my proposal gives WMECo its authorized rate of return
5 on its operating nuclear plants consistent with the rate of return targets outlined in the
6 Restructuring Act. In addition, it provides strong financial incentives to WMECo and
7 Northeast Utilities to operate Millstone 2 and 3 in an efficient manner and, if it is cost-
8 justified, at a high capacity factor in order to mitigate transition costs to the maximum
9 extent possible. My proposal would also reduce the administrative burden associated with
10 *ex post* reasonableness reviews of the operating costs for Millstone 2 and 3. My proposal
11 also allocates risks and rewards equitably between ratepayers and WMECo given that
12 WMECo would earn its authorized return on equity on its net book value for Millstone 2
13 and 3. My proposal would also give WMECo a strong incentive to continue to operate
14 Millstone 2 and 3 if market revenues exceeded actual going-forward costs. Finally, my
15 proposal provides WMECo and Northeast Utilities with significant financial incentives for
16 bringing Millstone 2 back on-line as scheduled.

1 **III. COST RECOVERY FOR MILLSTONE 1**

2
3
4 **A. WMECo Proposal**

5
6 **Q. Is Millstone 1 on-line at the present time?**

7
8 A. No. On July 24, 1998, WMECo decided to retire Millstone 1 (see WMECo's Electric
9 Restructuring Revised Plan ("Revised Plan"), pp. 41 and 43).

10
11 **Q. What rationale did WMECo provide for retiring Millstone 1?**

12
13 A. At pages 3-4 of his testimony, Mr. Morris cited several reasons for WMECo's decision,
14 including the following:

- 15 • "First, the marginally positive economic benefit of \$19 million indicated in the
16 CUO study was neither substantial nor assured;"
- 17
18 • "Second, new or heightened industry standards create relatively greater challenges
19 for plants of Millstone 1's vintage;"
- 20
21 • "Third, competition is coming;"
- 22
23 • "Fourth, while WMECO has offered to auction its nuclear plants by 2004,
24 WMECO believes that the sale of an operating Millstone 1 would have produced
25 little added mitigation value, and that any attempt to restart the unit in order to
26 enhance its sales price would only have resulted in added costs without increased
27 sale net proceeds;"
- 28
29 • "Finally, while the foregoing reasons are a sufficient basis for retiring the unit,
30 bringing the unit back to service would continue to burden WMECO's financial
31 and other resources."
- 32

1 **Q. WMECo states that the positive economic benefits of continued operation of**
2 **Millstone 1 were \$19 million. What were WMECo's estimates of the costs to own**
3 **and operate that unit?**
4

5 A. According to Mr. Morris, "the total net present value of the revenue requirements for
6 Millstone 1 between the projected July 1, 1999 restart and the expiration of the operating
7 license in 2010 is about \$2 billion." Id. at 4. Putting this in perspective, the expected
8 benefits of continued operation of Millstone 1 would be less than one percent of the
9 expected costs of operation, according to WMECo's testimony.
10

11 **Q. Please explain WMECo's proposal for recovery of costs associated with Millstone 1.**
12

13 A. WMECo has proposed that the Department allow the Company to (1) obtain a return of
14 and a return on its investment in Millstone 1 (see Revised Plan, pp. 38–39 and 43) and (2)
15 recover reasonable post-shutdown costs not recovered elsewhere (see Revised Plan, p.
16 41). Specifically, the Company has established a regulatory asset for the unrecovered
17 costs associated with Millstone 1, as explained in the Revised Plan:

18 In addition, as of July 24, 1998, WMECO established a regulatory
19 asset for the unrecovered costs associated with Millstone 1. This
20 regulatory asset includes unrecovered cost of plant, materials and
21 supplies, and final nuclear core in addition to the post-shutdown
22 costs discussed previously. The Company has reflected recovery
23 (return of and on) of the Millstone 1 regulatory asset over a 12-year
24 period beginning August 1, 1998.

25
26 (See Revised Plan, p. 43.)

1 **Q. Does WMECo estimate the dollar value associated with the Millstone 1 regulatory**
2 **asset?**

3
4 A. WMECo estimates the regulatory asset associated with Millstone 1 at \$87.084 million, as
5 of July 24, 1998. The components of this regulatory asset include \$46.827 million
6 associated with unrecovered plant balance, \$25.635 million associated with pre-
7 decommissioning O&M, \$3.278 million associated with materials and supplies, and
8 \$11.344 million associated with final core, as of July 28, 1998 (see Exhibit 13E, Schedule
9 2, p. 6A of 14).

10
11 **Q. Does WMECo propose to earn a return on this regulatory asset?**

12
13 A. Yes. WMECo is proposing to earn a return on the Millstone 1 regulatory asset. (See
14 Revised Plan, p. 43.)

15
16 **Q. Has WMECo proposed to securitize its Millstone 1 regulatory asset?**

17
18 A. Yes.

19
20 **B. Critique of WMECo Proposal**

21 **Q. Is WMECo's proposal to obtain a return on its investment in Millstone 1 consistent**
22 **with standard ratemaking treatment regarding assets that have been prematurely**
23 **retired?**

24
25 A. No. The Department, the Supreme Judicial Court of Massachusetts, and regulators in
26 other states have typically not allowed utilities to earn a return on an asset that has been
27 retired prior to the end of its useful life.

1 **Q. How has the Department applied this standard?**

2
3 A. In DPU 18031-A (July 15, 1975), the Department determined that abandoned property
4 should be excluded from rate base. The Supreme Judicial Court of Massachusetts, in
5 Fitchburg Gas and Electric Light Company v. Department of Public Utilities, 371 Mass.
6 881 (1977), agreed with the Department in this matter, stating that:

7 The permissibility of excluding such abandoned property from a
8 utility company's rate base is a question which this court has faced
9 and decided. *Boston Gas Co. v. Department of Pub. Utils.*, 367
10 Mass. 92 (1975). We found supporting authority in academic
11 works and agency decisions for the conflicting arguments of the
12 utility and the Department in that case. *Id.* at 102 and n.4.
13 Consequently, we found the Department free to select a rule of its
14 choice on this subject as long as the rule was consistently applied,
15 did not have a confiscatory effect, and as long as no special
16 circumstances compelled application of a different rule. *Id.* at 103-
17 104.

18
19 We see no reason to alter our view that the Department may institute a
20 policy that the unamortized costs of prematurely abandoned property
21 should be excluded from rate base calculations, even though the utility's
22 original investment decision and retirement decisions were prudently made.

23 371 Mass. at 886. This issue will be briefed by DOER later in this proceeding.

24
25 **Q. Do you have any examples from other states in which nuclear assets were removed**
26 **from rate base due to early retirement?**

27
28 A. Yes. In California, PG&E retired Humboldt Bay Unit 3, a nuclear power plant, in 1976.
29 This plant was removed from service by PG&E because PG&E considered the plant to no
30 longer be economic to operate given the uncertainties in future regulation (specifically,
31 regulation by the Nuclear Regulatory Commission). The California Public Utilities

1 Commission ("CPUC") allowed PG&E only a return of but not on rate base at the time of
2 retirement.

3
4 **C. Conclusion**

5
6 **Q. Based upon your analysis, what is your recommendation?**

7
8 A. Consistent with the policy and decisions discussed above as well as examples from other
9 states, I recommend that the Department allow WMECo to obtain a return of, but not a
10 return on, its remaining investment in Millstone 1.

1 **IV. COST RECOVERY FOR MILLSTONE 2 AND 3**

2
3
4 **A. Description of WMECo's Cost Recovery Proposal**

5
6 **Q. Please explain WMECo's proposal for recovery of costs associated with Millstone 2**
7 **and 3.**

8
9 A. For Millstone 2 and 3, WMECo has proposed that it receive a return of and return on the
10 unrecovered investment (i.e., sunk costs), as well as recovery of its so-called "unavoidable
11 costs" through the transition mechanism. In addition, WMECo has proposed
12 "performance based rates" for recovery of its going-forward costs. WMECo has defined
13 its going-forward costs as all of the costs of owning and operating Millstone 2 and 3
14 except for sunk costs and other costs WMECo has deemed unavoidable. Finally,
15 WMECo proposes to receive 75 percent of any revenues in excess of its going-forward
16 costs.

17
18 I will address the issue of recovery of going-forward costs below. Mr. Yoshimura's
19 testimony addressed the issues surrounding recovery of sunk costs for Millstone 2 and 3
20 (Direct Testimony of Henry Y. Yoshimura Regarding Retail Standard Service Transition
21 Rates, October 9, 1998, p. 34 and exhibits cited).

1 **B. Recovery of Going-Forward Costs**

2
3 **1. WMECo's Proposal**

4
5 **Q. Please describe WMECo's proposal for recovery of the going-forward costs for**
6 **Millstone 2 and 3.**

7
8 A. WMECo proposes to implement a PBR mechanism to recover the prospective costs of
9 owning and operating Millstone 2 and 3. This PBR would guarantee WMECo recovery of
10 its going-forward costs for Millstone 2 and 3. In addition, the Company's proposed PBR
11 approach gives WMECo the opportunity to receive significantly more than its authorized
12 rate of return for these units by giving 75 percent of net revenues (i.e., gross revenues less
13 going-forward costs) to WMECo's shareholders. Under WMECo's proposal, its
14 shareholders will bear 75 percent of the costs if net revenues are negative.

15
16 **Q. How does WMECo define gross revenues?**

17
18 A. WMECo defines gross revenues as the market-based price of power from Millstone 2 and
19 3 multiplied by the generation supplied by these units.

20
21 **Q. How does WMECo propose to determine the market-based price of power for**
22 **Millstone 2 and 3?**

23
24 A. In his testimony, Mr. Wiater explains that "[t]he capacity and energy from Millstone Units
25 2 and 3 would be sold into the competitive market, thereby receiving market-based rates."
26 (See Testimony of Michael A. Wiater, p. 6). Mr. Soderman indicates that WMECo will
27 "maximize the revenues from this sale by offering entitlements in the available energy and
28 capacity of Millstone 2 and 3." (See Testimony of Richard A. Soderman, p. 13).

1 **Q. How does WMECo define its going-forward costs for Millstone 2 and 3?**

2
3 A. WMECo defines going-forward costs as the variable operating costs associated with
4 owning and operating Millstone 2 and 3. These variable costs include nuclear fuel, non-
5 fuel O&M, property taxes, payroll taxes, income taxes, and return of and return on capital
6 additions authorized after December 31, 1995. (See Testimony of Michael A. Wiater, pp.
7 2-3). However, WMECo does not include in its definition of going-forward costs the so-
8 called “unavoidable costs.”

9
10 **Q. What does WMECo consider unavoidable costs?**

11
12 A. WMECo defines unavoidable costs as “...those certain costs which continue to be incurred
13 after March 1, 1998 whether a plant operates through its license life or not.” WMECo
14 includes in the unavoidable cost category “property taxes, NRC fees, insurance, site and
15 plant security, regulatory compliance costs and costs associated with spent nuclear fuel.”
16 (See Testimony of Michael A. Wiater, p. 5).

17
18 **Q. Where does WMECo propose to recover these unavoidable costs?**

19
20 A. WMECo proposes to recover these so-called unavoidable costs through the Transition
21 Charge. Thus, WMECo’s definition of going-forward costs does not include some of the
22 costs that might be incurred to keep the plant in operation (e.g., property taxes).

1 **Q. Please describe WMECo's proposed mechanism to allocate the net revenues from**
2 **Millstone 2 and 3 between ratepayers and shareholders.**

3
4 A. WMECo proposes to determine jointly the net revenue for both units. (See Revised Plan,
5 page 41.) Thus, if the net revenue of Millstone 2 is negative and the net revenue for
6 Millstone 3 is positive, then the net revenue for the sharing mechanism is the sum of the
7 net revenues for each unit. WMECo then proposes to allocate the net revenues for both
8 units (whether positive or negative) to shareholders and ratepayers in the ratio of 75:25.
9 For example, if the net "revenues" for Millstone 2 were a negative \$25 million and the net
10 revenues for Millstone 3 were \$75 million for a particular year, then WMECo's
11 shareholders would receive \$37.5 million and WMECo's ratepayers would be credited
12 with \$12.5 million in mitigation of transition costs.

13
14 **Q. When does WMECo propose that this sharing mechanism take effect?**

15
16 A. The sharing mechanism would begin for Millstone 2 only after that unit returns to service.
17 The mechanism for Millstone 3 would begin after the effective date of the decision in this
18 proceeding.

19
20 **Q. How does WMECo propose to determine net revenues?**

21
22 A. WMECo proposes to use an *ex post* determination of net revenues on an annual basis.
23 WMECo is proposing that the Department perform an annual, *ex post* audit of going-
24 forward costs. However, the details of how this *ex post* determination will be
25 implemented are unclear. For example, WMECo does not clearly define the scope of such

an audit, nor specify whether the audit would assess the reasonableness of the going-forward costs or simply verify that WMECo's expenditures were correctly booked.

2. Critique of WMECo's Proposal

Q. Do you believe that WMECo's PBR mechanism is reasonable?

A. No, I do not for several reasons. First, WMECo's PBR mechanism provides WMECo with the ability to receive well in excess of its authorized rate of return on its Millstone units without increasing WMECo's risk. Second, WMECo's proposal to determine jointly the net revenues for both plants is unreasonable since it might encourage continued operation of both Millstone units even if one unit is uneconomic to operate. Third, WMECo's proposal to base its calculation of net revenues on the price of entitlements to energy and capacity from Millstone 2 and 3 should be revised so that the value for power is derived from a larger market. Finally, WMECo's proposal to delay operation of its PBR until Millstone 2 is on-line is flawed since it puts WMECo ratepayers at risk and does not give WMECo as strong of an incentive as this proposal to bring Millstone 2 back on-line as proposed.

Q. Why do you believe that WMECo would be able to receive a return in excess of its authorized rate of return under the proposed PBR mechanism?

A. WMECo proposes to receive both a return of and return on its sunk costs in Millstone 2 and 3. Under traditional cost-of-service regulation, this return would be the target return

1 that WMECo could receive for the operation of Millstone 2 and 3.⁷ Under WMECo's
2 proposed PBR mechanism, WMECo projects that it would receive an additional return
3 associated with the operation of Millstone 2 and 3. This return is equal to 75 percent of
4 the difference between the market price of power and the operating costs of Millstone 2
5 and 3.

6
7 **Q. Do you believe that this additional return is significant?**

8
9 A. Yes. Table 2 presents WMECo's estimates of this additional return as well as WMECo's
10 estimated return on Millstone 2 and 3, assuming that WMECo securitizes 90 percent of
11 the sunk costs associated with Millstone 2 and 3 and earns a return on the remaining 10
12 percent of its sunk costs and on capital additions authorized after December 31, 1995. As
13 can be seen from Table 2, the additional return increases WMECo's return on Millstone 2
14 and 3 by 22 percent in 2000.

⁷ WMECo could also earn an additional return to the degree that Northeast Utilities was able to operate Millstone 2 and 3 for less than the authorized cost-of-service for these units in WMECo's rates.

Table 2

Additional Return to WMECo Resulting From PBR

Year	Return on Millstone 2 and 3	Additional Return	Increase in Return
2000	37,734	10,992	22%
2001	38,772	8,754	18%
2002	39,780	6,570	14%
2003	40,689	6,024	13%
2004	16,576	10,023	38%

Q. Is WMECo bearing additional risks to obtain these additional returns?

A. WMECo's parent company, Northeast Utilities, has the ability to control the operation of the Millstone units from a financial perspective. Thus, if market prices are too low relative to the going-forward costs, Northeast Utilities can obtain alternate power from market sources rather than operate a Millstone unit that is "out of the market." This was the same set of opportunities and risk factors faced by WMECo prior to restructuring in a cost-of-service regime. Therefore, WMECo's incremental risk is short term and *de minimis* compared to the reward that WMECo could potentially realize. Under its proposal, WMECo would be able to increase its returns by, in some cases, over 22 percent and not bear significant additional risks.

1 **Q. Do you have other concerns with WMECo's proposed sharing mechanism?**

2
3 A. Yes. I have three other concerns. First, WMECo's proposal to begin its PBR for
4 Millstone 2 on its date of synchronization with the grid is unreasonable. WMECo has
5 proposed to bring Millstone 2 on-line by the end of 1998. (See Testimony of Richard A.
6 Soderman, p. 20). This is before the Department is expected to issue a decision on
7 nuclear cost recovery in this case. Thus, WMECo should be given a strong incentive to
8 return Millstone 2 to service as proposed (but no later than the effective date of the
9 decision in this proceeding). Without that incentive, WMECo may choose to delay the
10 on-line date for Millstone 2 since it will continue to receive what amounts to the
11 equivalent of cost-of-service revenues for this unit.

12
13 Second, WMECo's proposal to base revenues on an auction of entitlements to Millstone's
14 energy and capacity should be revised. If WMECo conducts this auction and allows an
15 affiliate to participate as one of the bidders, it could result in an affiliate outbidding all
16 other competitors due to the sharing mechanism. This opportunity for market distortion
17 can be avoided under my proposal.

18
19 Third, WMECo's proposal to aggregate net revenues for both units prior to allocating
20 savings is not reasonable. The proposal gives WMECo the incentive to continue to run an
21 unprofitable Millstone unit as long as profits from one more than offset losses from the
22 other. Such an action would, on balance, increase transition costs, which is a clear
23 violation of the Restructuring Act's mandate to mitigate transition costs to the maximum

1 extent possible. St. 1997, c. 164, § 193 (G.L. c. 164, § 1G(d)(1)). If sharing is based on
2 the costs and revenues from individual units, then WMECo would not be able to shield its
3 shareholders from the cost consequences of the operation of an “out-of-market” unit.
4 Consequently, WMECo and its shareholders would receive an accurate economic signal
5 from such a unit.

6
7 Finally, it is clear that an alternative approach to estimating market price is needed. One
8 possible method for determining market price is to use the spot energy and capacity prices
9 from ISO-NE as the benchmark market price. ISO-NE is less subject to manipulation by
10 any single entity since it is a much deeper market than the market for entitlements to the
11 Millstone units. Thus, to mitigate risks, the Department should adopt the annual average
12 spot prices for energy and capacity from ISO-NE as the benchmark for market prices.

13 14 **3. Conclusions**

15
16 **Q. What are your conclusions regarding WMECo’s proposed PBR?**

17
18 **A.** WMECo’s proposed PBR unfairly gives WMECo the opportunity to receive returns on
19 the operation of Millstone 2 and 3 in excess of its authorized rate of return. The PBR
20 mechanism is also unreasonable because it could encourage the continued operation of
21 Millstone 2 or 3 even if the market revenues from power sales from either of those units
22 are less than going-forward costs. WMECo’s proposed date for commencement of its
23 sharing mechanism for Millstone 2 places ratepayers at risk for continuing to pay
24 essentially cost-of-service rates for Millstone 2 even if that unit is not generating power.

1 Also, WMECo's proposal to auction entitlements of Millstone 2 and 3 capacity and
2 energy to determine the market price of power should be modified to use an external index
3 such as the ISO-NE spot energy and capacity price to ensure true market prices are used
4 to determine net revenues.

5
6 Given the problems with the WMECo proposal, I have outlined two possible alternative
7 proposals for recovery of nuclear-related going-forward costs. These alternatives are
8 discussed below.

9 **4. Alternative to WMECo Proposal**

10
11 *a. Objectives*

12
13 **Q. What are the objectives of the alternative approaches for recovery of going-forward**
14 **costs of Millstone 2 and 3?**

15
16 **A.** I considered a number of factors in developing alternatives to WMECo's proposed nuclear
17 PBR. These factors were derived from a set of overarching objectives:

18
19 **1. Provide ratepayers with the benefits of operation of the Millstone units in a**
20 **manner that mitigates transition costs consistent with prior ratemaking**
21 **treatment.** As noted above, the WMECo proposal allocates the majority of any
22 benefits of continued operation of the Millstone units to WMECo shareholders
23 rather than to ratepayers. My proposals assure that WMECo ratepayers receive
24 the benefit of the bargain associated with the continued operation of Millstone 2
25 and 3. By this I mean that ratepayers will pay WMECo a reasonable rate of return

1 on its investment in exchange for WMECo operating Millstone 2 and 3 in a cost-
2 effective manner. Thus, any revenues from power sales from the Millstone units in
3 excess of going-forward costs should flow to ratepayers to mitigate transition
4 costs to the maximum extent possible. In short, in exchange for shouldering the
5 burden of any transition costs associated with Millstone 2 and 3, ratepayers should
6 receive the full benefit of any mitigation available from their operation.

7
8 **2. Encourage operation of the Millstone units if they are cost-effective.** Based
9 on WMECo's own assessment, the going-forward costs of Millstone 2 and 3
10 appear to be competitive relative to other generators in the New England power
11 market. If this proves to be the case, WMECo and Northeast Utilities should
12 continue to operate these units. The opportunity to earn return of and on
13 unrecovered capital, as long as the units are in operation, will provide an incentive
14 to operate provided that no significant losses occur. On the other hand, if going-
15 forward costs of either unit exceed market prices, then the unprofitable unit should
16 be retired.

17
18 **3. Provide incentives to control costs of operation of the Millstone units, thereby**
19 **increasing the market value of the plants and mitigating transition costs.**

20 Until recently, both Millstone 2 and 3 have been out of service on extended
21 maintenance outages. Northeast Utilities has expended capital to bring Millstone 3
22 back on-line and potentially to return Millstone 2 to service as well. However, the

1 market value of these assets is not directly related to capital that has been
2 expended in the past. Rather, the market value of these assets will be based on the
3 expected going-forward costs of the plants relative to market prices. Therefore, if
4 market prices track WMECo's forecasted prices, and if Northeast Utilities is able
5 to control operating costs and maintain reliable operation, then the market value of
6 these assets will be positive. Further, if Northeast Utilities is able to reduce
7 operating costs and continue reliable operation, then the market value of these
8 plants will be enhanced, which would result in greater mitigation of transition
9 costs. Therefore, if Northeast Utilities is able to reduce going-forward costs
10 relative to a forecasted target, it should profit from those efforts.

11
12 **4. Allow WMECo an opportunity to earn its authorized rate of return on going-**
13 **forward capital expenditures.** WMECo should receive the benefits of traditional
14 ratemaking for future capital expenditures. This means that WMECo should
15 receive both a return of and return on prudent future capital expenditures.

16
17 **5. Risks of major movements in either market prices or going-forward costs**
18 **should be mitigated to the degree possible.** As discussed below, one possible
19 approach for cost recovery would be to develop a forecast of going-forward costs.
20 Based on this forecast, the *pro forma* reasonableness of continued operation of the
21 Millstone units could be determined. However, if either market prices are
22 significantly lower than anticipated or if going-forward costs are significantly

1 higher than forecast, either ratepayers or WMECo should have options for re-
2 examining the cost-effectiveness of continued operation of the Millstone units.
3

4 These objectives are balanced in the alternate proposals for recovery of going-forward
5 costs outlined below.
6

7 *b. Proposed Sharing Mechanism*
8

9 **Q. Please describe your proposal regarding the sharing of revenues above going-**
10 **forward costs.**
11

12 A. In contrast to WMECo's proposal, I propose that all revenues received by WMECo in
13 excess of going-forward costs should be used to mitigate transition costs. I propose to
14 allocate all revenues in excess of going-forward costs to ratepayers rather than share these
15 net revenues between ratepayers and shareholders. In addition, I propose that if revenues
16 are less than going-forward costs over any one year period, then WMECo's shareholders
17 should bear these losses rather than ratepayers.
18

19 **Q. Why do you believe that such a sharing arrangement is reasonable?**
20

21 A. Under traditional cost-of-service ratemaking, WMECo would be allowed to earn a return
22 on its undepreciated capital investments. Because Mr. Yoshimura's proposal allows
23 WMECo to earn a rate of return on its sunk capital (via the Transition Charge) and, as
24 discussed below, because one of my alternative approaches for recovery of going-forward
25 costs allows WMECo an opportunity to profit to the degree that WMECo can reduce

costs below the forecasted going-forward costs, I see no reason to allow WMECo the opportunity to earn even greater returns on the operation of the Millstone units.

Q. Do you propose that ratepayers bear any more losses from the ownership and operation of the Millstone units?

A. No.

Q. Please explain why this proposal, which appears to have asymmetric risk sharing, is reasonable.

A. This proposal is reasonable for two reasons. First, WMECo (through Northeast Utilities) is the entity best positioned to control this risk. Should going-forward costs exceed market revenues, Northeast Utilities can act quickly to temporarily or permanently terminate power deliveries from an unprofitable unit. Second, WMECo receives a return on undepreciated capital through the Transition Charge. WMECo's shareholders thereby earn significant returns as compensation for bearing the downside risk discussed above.

Q. Why should the Department adopt this proposed sharing mechanism, as opposed to the sharing mechanism proposed by the Company?

A. The Department should adopt this proposal because it ensures that transition costs are mitigated to the maximum extent possible, consistent with the Restructuring Act. St. 1997, c. 164, § 193 (G.L. c. 164, § 1G(d)(1)). As discussed in Mr. Yoshimura's testimony, the Company will be receiving a return of and return on its investment in Millstone 2 and 3. It is unnecessary and contrary to ratepayer interests to provide

1 additional returns to WMECo shareholders for the continued operation of what WMECo
2 characterizes as a below market source of power. By WMECo's own estimates, its
3 proposed sharing mechanism would provide shareholders with an additional \$6 to \$10
4 million annually. This is money that could and, in my opinion, should be used to mitigate
5 WMECo's transition costs.

6
7 In addition, the Department should adopt this proposal because it ensures that ratepayers
8 will not pay for generation that is not cost-effective on a going-forward basis. If costs
9 exceed revenues in any year (i.e., if the unit is not cost-effective), ratepayers would bear
10 no portion of these costs. This ensures that continued operation of Millstone 2 and 3 does
11 not add to transition costs.

12
13 *c. Commencement Date for PBR Mechanism*

14
15 **Q. When should your PBR mechanism take effect?**

16
17 A. I propose to start this mechanism for both Millstone units as of the effective date of the
18 Department's decision in this proceeding.

19
20 **Q. Why should the Department adopt your proposal immediately for Millstone 2,**
21 **rather than when it is back on-line?**

22
23 A. The Department should adopt this proposal because it ensures that shareholders, rather
24 than ratepayers, bear the costs when a unit is shut down for an extended period, and
25 provides WMECo with an incentive to return it to service in a timely fashion. Under

WMECo's proposal, ratepayers would bear all of the costs that are currently in rates until Millstone 2 returned to service.

d. PBR Mechanism Should Apply to Each Unit Individually

Q. What is your proposal regarding aggregation of net revenues for the two Millstone units prior to determining the net revenue allocated to customers?

A. I propose that net revenues from each unit be determined individually and that each individual unit's net revenue be allocated to customers.

Q. Why should the Department adopt your proposal to apply the PBR to Millstone 2 and 3 separately, rather than apply the mechanism to the two units combined?

A. The Department should adopt this proposal for Millstone 2 and 3 separately because it ensures that ratepayers will not be forced to subsidize the operation of a unit that is not cost-effective. An example is illustrative. Under WMECo's proposal, if Millstone 2 incurs a loss of \$20 million and Millstone 3 makes a profit of \$20 million, there would be no combined profits or losses and there would be no sharing of either profits or losses. Under my proposal, ratepayers would see the benefits of the \$20 million profit on Millstone 3, but would bear none of the \$20 million costs of the uneconomic operation of Millstone 2. Although under my proposal WMECo shareholders would assume a \$20 million loss, WMECo (through Northeast Utilities) is also in a position to control this risk by not operating Millstone 2 -- thereby avoiding the loss. In addition, shareholders are provided with a return on their investments in Millstone 2 and 3 that approaches \$40 million annually. This, in my view, adequately compensates WMECo for bearing this downside risk.

1 *e. Market Price Should Be Based on ISO-NE Spot Price*

2
3 **Q. How do you propose to determine market-based revenues?**

4
5 A. I believe that the true value of WMECo's assets will be reflected in the ISO-NE spot
6 price. This spot price should include both energy and capacity values. The spot price
7 would be determined hourly and then averaged over the hours that Millstone 2 and/or 3
8 operated.

9
10 **Q. Why should the ISO-NE spot market be used to determine market-based revenues?**

11
12 A. The primary reason why the Department should adopt this proposal is that it would
13 provide an external benchmark that is not subject to manipulation by WMECo or other
14 parties. In addition, if my sharing proposal discussed above is adopted by the Department,
15 it would provide WMECo with an incentive to negotiate the best deal possible for
16 ratepayers even though WMECo would not receive the upside benefits. Accordingly,
17 WMECo's output from Millstone 2 and 3 should be valued based upon the ISO-NE spot
18 price. In this regard, WMECo would have the option of simply selling into the ISO-NE
19 market.

20
21 *f. Alternative for Recovery of Going-Forward Costs*

22
23 **Q. Please summarize your two options for recovery of going-forward costs for**
24 **WMECo's nuclear units.**

25
26 A. I propose two different types of cost recovery mechanisms that meet some or all of the
27 objectives outlined above:

1. Forecasted PBR. The first cost recovery mechanism is a PBR mechanism which gives WMECo a benchmark for going-forward costs. If WMECo's actual costs are less than the benchmark, then WMECo's shareholders would benefit. On the other hand, if WMECo's costs exceed the benchmark, then shareholder returns on the Millstone units would decrease.

2. ***Ex Post Determination of Reasonable Cost of Service.*** The second mechanism is more akin to traditional cost of service regulation. WMECo's actual cost of service for operating the Millstone units would be filed by WMECo annually. These costs would be audited for reasonableness by the Department. After a determination by the Department of the amount of reasonably-incurred costs, WMECo would then recover those costs in future rates.

Each of these proposals are discussed in more detail below.

1) Option 1: Forecast of Going-Forward Costs

Q. Please describe how the forecasted going-forward cost alternative differs from the proposal presented by WMECo.

A. The forecasted alternative differs from WMECo's proposal in the following respects:

- The sharing mechanism proposed by WMECo would be modified from sharing 25 percent of the “profits” with ratepayers (and 75 percent with shareholders) to sharing 100 percent of the “profits” with ratepayers (and 0 percent with shareholders).

- 1 • The sharing mechanism proposed by WMECo would also be modified from
2 sharing 25 percent of the “losses” with ratepayers (and 75 percent with
3 shareholders) to sharing 0 percent with ratepayers (and 100 percent with
4 shareholders).
5
- 6 • WMECo’s proposal that its PBR mechanism would go into effect when Millstone
7 2 is back on-line would be modified to ensure that the proposal is effective
8 immediately.
9
- 10 • WMECo’s proposal that the PBR mechanism apply to Millstone 2 and 3 combined
11 would be modified to apply to Millstone 2 and 3 separately.
12
- 13 • WMECo would only recover the forecasted amount of going-forward costs in
14 rates as opposed to the costs that are actually incurred by WMECo. The
15 forecasted level of going-forward costs would be determined by the Department.

16 The first four points are discussed above. The final point is discussed below.
17

18 **Q. Please discuss the forecasted PBR proposal outlined above.**
19

20 A. Under this proposal, WMECo would present to the Department a forecast of going-
21 forward costs on a per-kWh basis for Millstone 2 and 3. The Department, WMECo, and
22 other interested parties would examine the proposal, with the end result being a
23 Department-approved forecast of going-forward costs for Millstone 2 and 3. This
24 adopted forecast would define the cost recovery for WMECo associated with going-
25 forward costs. Until WMECo and Northeast Utilities divest the nuclear units, the
26 maximum cost recovery from ratepayers would be based on this forecast.
27

1 **Q. Which Millstone costs of operation would be included in the benchmark cost**
2 **forecast?**

3
4 A. The benchmark forecast would include all avoidable going-forward costs for the Millstone
5 units. In other words, it would include all of the costs associated with the ownership and
6 operation of Millstone 2 and 3 except for return of and return on sunk costs and the
7 “unavoidable costs.”

8
9 **Q. Would this benchmark forecast include decommissioning costs?**

10
11 A. No. Decommissioning costs would be handled as proposed by WMECo (i.e., through the
12 Transition Charge).

13
14 **Q. Through what mechanism would WMECo recover its return of and return on sunk**
15 **costs?**

16
17 A. As discussed previously, WMECo would recover its return of and return on sunk costs
18 through the Transition Charge mechanism. The rate of return for this return component
19 would be as discussed by Mr. Yoshimura in his testimony. (See Testimony of Henry Y.
20 Yoshimura Regarding Retail Standard Service Transition Rates, October 9, 1998, pp. 34-
21 35 and exhibits cited.)

1 **Q. Would this benchmark forecast include capital expenditures authorized prior to**
2 **December 31, 1995 but made after that date?**

3
4 A. No. To the degree that these capital expenditures are deemed reasonable, they would be
5 recovered through the Transition Charge mechanism. The forecasted benchmark only
6 addresses going-forward costs.

7
8 **Q. Your proposal would require an *ex ante* determination of going-forward costs for**
9 **Millstone 2 and 3. When would such a determination be made?**

10
11 A. There are three possibilities. First, the Department could schedule an additional phase of
12 this proceeding during which these going-forward costs could be estimated. Such an
13 extension should not extend the proceeding significantly since WMECo has already
14 developed such an estimate of going-forward costs.⁸ Thus, the burden would fall upon
15 interveners such as DOER to develop cost estimates for cohort units. As a second
16 alternative, the Department could simply adopt as placeholders WMECo's estimates as
17 presented in this proceeding and thereafter begin a formal investigation into the going-
18 forward costs of Millstone 2 and 3. The placeholder cost estimates would be adopted
19 subject to refund. Once the Department adopted a benchmark forecast, rates would be
20 adjusted with refunds of over-charges or rate increases resulting from under-charges.
21 These adjustments would include any interest on over- or under-collection. A third
22 possibility, which is a variant of the second alternative, would be for the Department to
23 simply use the cost-of-service for Millstone 2 and 3 as presently reflected in WMECo's
24 rates and to begin an investigation into the going-forward costs of these units. As with the

⁸ See WMECo Response to AG-5-5.

second alternative, any over- or under-charges would be refunded with interest according to Department policy.

Q. Is development of a forecast of going-forward costs for Millstone 2 and 3 possible?

A. Yes. Such a forecast will have to be developed pursuant to the Connecticut restructuring legislation. In that legislation, Northeast Utilities' operating costs will be compared to those of "a nuclear generation asset of comparable size, age, and technical characteristics that is prudently and efficiently managed...". 1998 Conn. Pub. Acts 98-28, § 6(b)(4). Such a forecast (based on best practices in the industry) could be developed for nuclear units which are similar to the Millstone units.

Q. Does this proposal place either WMECo or ratepayers at risk of forecasting error?

A. Any forecast of future events is uncertain. In order to mitigate these forecasting risks, I propose to allow for a "re-opener" after 30 months of operation under this proposal. Either WMECo or ratepayers could re-open consideration of whether the original decision regarding the cost-effectiveness of continued operation of the Millstone units is still correct.

Q. Please describe why and how WMECo would exercise its option to re-open.

A. WMECo's major downside risk under this proposal would be that it significantly under-forecasts going-forward costs. Such an error in forecasting could occur because of a major unexpected capital addition. Under this proposal, WMECo would be able to

request a re-opener if the actual going-forward costs exceeded the adopted forecast by 15 percent. The 15 percent threshold is designed to place some burden on parties to develop the best forecasts of going-forward costs.

Q. Why would ratepayers want to allow WMECo the opportunity to re-open the forecast of going-forward costs?

A. The forecast of going-forward costs might significantly under-estimate actual going-forward costs. However, if both market prices and going-forward costs are higher than expected, then continued operation of Millstone 2 and 3 might be economically justified. Without a re-opener, WMECo might elect to shut down the Millstone units even if they were cost-effective compared to market rates since WMECo would be losing money on continued operation (i.e., actual going-forward costs would be less than forecasted going-forward costs). Thus, ratepayers would have an interest in assuring that if Millstone 2 and 3 were still cost-effective, then WMECo would keep them operating. The re-opener allows just such a determination.

Q. Please describe how ratepayers could exercise their option to re-open consideration of Millstone.

A. The main forecasting risk faced by ratepayers is that of over-forecasting market prices relative to the cost of continuing to operate Millstone. Thus, if market prices are significantly lower than expected, then the continued operation of Millstone might not be

1 cost-effective. If this were the case, then ratepayers would have the option to re-open.⁹

2 Such a re-opener would only occur if market prices were less than the benchmark going-
3 forward costs.

4
5 **Q. If ratepayers were to exercise their option to re-open and the Department were to**
6 **determine that continued operation of Millstone 2 and 3 was uneconomic, what**
7 **would occur?**

8
9 A. In this event, WMECo would still be able to recover the return of its sunk costs in the
10 transition charge. Consistent with my testimony concerning Millstone 1, WMECo would
11 not be allowed to recover a return on its sunk costs. In addition, WMECo would be
12 allowed to recover only the return of, but not on, capital additions made subsequent to the
13 institution of this PBR proposal.

14
15 **Q. What are the advantages of this proposal?**

16
17 A. There are several. First, it provides strong incentives to Northeast Utilities to control
18 going-forward costs. By keeping costs low prior to divestiture, WMECo's shareholders
19 benefit financially. Also, by controlling costs, the market value of the Millstone units will
20 be enhanced (since market value is directly related to operating costs). Second, unlike the
21 WMECo proposal, this proposal does not require an annual *ex post* review of going-
22 forward costs. This would reduce the administrative burden on the Department. Third,
23 this proposal mitigates most of the forecasting risk associated with a forward-looking

⁹ This assumes that Northeast Utilities does not choose to retire the Millstone units at the point that market prices are less than going-forward costs.

1 estimate of going-forward costs through the re-opener mechanism described above. In the
2 event that the re-opener mechanism is not needed (i.e., market prices and going-forward
3 costs are relatively similar to forecasted), then this PBR mechanism would give WMECo a
4 significant time period over which to reduce costs and, as a result, earn enhanced returns
5 for their shareholders. Such a long regulatory lag is desirable as an attribute of any PBR
6 mechanism.¹⁰

7
8 **Q. Is PBR a novel concept?**

9 A. No. Forms of incentive regulation have been used for years in the regulation of electric
10 utilities. In fact, many nuclear plants that went into service during the 1980's were subject
11 to some sort of incentive mechanism. Similarly, many fossil fuel plants were subject to
12 heat rate performance standards or incentive mechanisms. However, these performance
13 incentive mechanisms were partial at best. That is, they were still far removed from what
14 ratepayers care about most like rates, service quality, or total costs. PBR as the term is
15 used today refers to regulatory mechanisms that give the utility an incentive to meet more
16 broad benchmarks such as overall revenues, unit costs, or prices. PBR is now broadly
17 accepted as having superior properties for regulating monopoly utility assets or services.

¹⁰ G.A. Comnes, S. Stoft, N. Greene, and L.J. Hill, "Performance-Based Ratemaking for Electric Utilities: Review of Plans and Analysis of Economic and Resource Planning Issues," Volume 1, Lawrence Berkeley National Laboratory, LBL-37577, November 1995, p. 19.

1 **Q. What are the drawbacks to this proposal?**

2
3 A. While there are several drawbacks associated with this proposal, they are relatively minor.
4 First, the proposal requires an up-front determination of going-forward costs. This would
5 likely be a highly contentious proceeding. However, as noted above, such a determination
6 will ultimately need to be developed in Connecticut. Second, developing a forecast is not
7 the typical approach to ratemaking for the Department. It is my understanding that the
8 Department typically uses historic test years in its rate cases rather than prospective test
9 years as is proposed here. Third, there is some degree of risk associated with this
10 approach because it is based on a forecast of going-forward costs.

11
12 2) Option 2: *Ex Post* Determination of Reasonable Cost of Service

13
14 **Q. How does your proposed cost-of-service mechanism differ from that proposed by**
15 **WMECo?**

16
17 A. The cost of service alternative mentioned above would differ from WMECo's proposal in
18 the following respects:

- 19 • The sharing mechanism proposed by WMECo would be modified from sharing 25
20 percent of the "profits" with ratepayers (and 75 percent with shareholders) to
21 sharing 100 percent of the "profits" with ratepayers (and 0 percent with
22 shareholders). This attribute of the proposal is discussed above.
23
- 24 • The sharing mechanism proposed by WMECo would also be modified from
25 sharing 25 percent of the "losses" with ratepayers (and 75 percent with
26 shareholders) to sharing 0 percent with ratepayers (and 100 percent with
27 shareholders). This attribute of the proposal is discussed above.
28
- 29 • WMECo's proposal that its PBR mechanism would go into effect when the units
30 are back on-line would be modified to ensure that the proposal is effective
31 immediately.
32

- WMECo’s proposal that the PBR mechanism apply to Millstone 2 and 3 combined would be modified to apply to Millstone 2 and 3 separately.
- WMECo would be allowed to recover its going forward costs in the manner it has proposed, but only to the extent that these costs are determined to be “reasonable” based upon an *ex post* review conducted annually or on another periodic basis.

The first four points are addressed above. The final point is discussed below.

Q. Why should the Department conduct a reasonableness review of WMECo’s going-forward costs?

A. Absent this provision, WMECo would have little incentive to try and reduce the costs associated with Millstone 2 and 3 because under this option it would receive none of the upside reward if it obtained cost reductions. Moreover, WMECo may, in fact, have incentives to increase its costs, because it could potentially increase the book value of its Millstone 2 and 3 assets. If WMECo must prove that its going-forward costs are “reasonable” and these costs are subject to heightened scrutiny, WMECo may have greater incentives to control its costs.

Q. What are the benefits of this approach, as opposed to WMECo’s approach?

A. There are a number of benefits associated with this option. First, it ensures that transition costs are mitigated to a much greater extent than under WMECo’s proposal. Second, this proposal is relatively consistent with WMECo’s proposal, in that it does not require a forecast of going forward costs. Third, this proposal ensures that transition costs are not increased by the continued operation of Millstone 2 and 3. Finally, this proposal provides

1 some incentives for WMECo to control costs as going-forward costs would be reviewed
2 for reasonableness.

3
4 **Q. What are the drawback of this approach?**

5
6 A. There are several drawbacks with this proposal. First, it provides only weak incentive for
7 WMECo to actually reduce its costs, as all of the operating efficiencies are passed on to
8 ratepayers, and not to shareholders. Second, this proposal may be administratively
9 burdensome, to the extent that *ex post* reviews and reasonableness reviews must be
10 conducted. These are likely to be highly contentious and time-consuming proceedings.

11
12 g. *Conclusion*

13 **Q. Based upon your analysis, what is your recommendation?**

14 A. Consistent with the discussion above and considering the benefits of each approach, I
15 recommend that the Department adopt a forecast of going-forward costs rather than
16 conduct *ex post* reasonableness reviews.

17
18 **Q. Does this conclude your testimony?**

19 A. Yes.